Marion County
OREGON
Public Works Land Development Engineering & Permits
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STANDARD CONSTRUCTION NOTES

GENERAL NOTES

1. Details on approved plans take precedence over any applicable Standard Construction Notes. These Notes shall take precedence over any other general or standard notes in the plans that deal with the same subject.

2. All materials and workmanship for facilities in road right-of-way of slope/drainage easements shall conform to the applicable regulations, specifications, codes, and requirements of Marion County, American Public Work Association (A.P.W.A) Oregon Chapter standard plans and specifications, the Oregon Plumbing Specialty Code (OPSC), the International Building Code (IBC), the Oregon Department of Environmental Quality (DEQ), and the Oregon Health Authority (OHA).

3. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction plans including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

4. The County must approve, before construction, any alteration, or variance from the approved plans. Any variations from these plans shall be proposed on construction field prints, transmitted to the Engineer, and forwarded to the County for approval.

5. Marion County's "Land Development Engineering & Permits" section typically will inspect all construction within the right-of-way and the slope/drainage easements.

6. Marion County's "Building Inspection" Section typically inspects all the construction on private property. Additionally, various agencies inspect the construction of their facilities in the County public right-of-way, such as the city for water and sanitary sewer, or the utility companies for their particular utility.

7. Inspections by the County shall not in any way relieve the Contractor from any obligation to perform the work in strict compliance with the applicable codes and agency requirements.

8. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems arising from un-inspected work and may require the Contractor to re-expose areas of concern.

9. The Contractor shall locate and mark all existing property and street monuments before construction. Any monuments disturbed during construction of the project, shall be replaced by a Registered Professional Land Surveyor at the Contractor's expense. Monument boxes are required for all public land corner monuments that fall within paved areas and also for centerline monuments within, or if applicable, outside the boundary of subdivision or condominium plats. See Marion County Surveyor's Office for approved monument boxes.

10. The required identification signs shall be in place before the start of work and shall be present during the construction period until all the work on the project is complete.

11. The Contractor shall attend a pre-construction meeting with the County to review plans and details before the start of work. The Contractor shall contact Marion County Public Works via email to MCLDEP@co.marion.or.us, 48-hours prior to the intended beginning of work.

12. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 503-232-1987).

13. The Contractor shall conform to Oregon DEQ's Construction Stormwater Permit 1200C for construction activities where one (1) acre or more is disturbed, or the DEQ 1200CN where applicable.

14. Temporary and Permanent erosion and sediment control measures shall be used as needed. The Contractor shall adhere to controlling agency's standards for control measures.

15. The Contractor shall procure a right of entry permit from affected railroads for all work within the railroad right-of-way and conform to all conditions of the permit.

16. Unless otherwise approved by the County, construction of all public facilities shall be done between 7:00 AM and 6:00 PM, Monday through Saturday.

17. Work in the right-of-way that impacts traffic and is within the urban growth boundary or on arterial roads, may be restricted to 8:30 AM to 3:30 PM. Work on Cordon Road, Lancaster Drive, Silverton Road west of Hollywood Drive or State Street west of Elma Street, and First Street in Stayton, that impacts traffic, shall typically be done from 9:00 PM to 6:00 AM, unless otherwise noted in the permit.

18. No work in the right-of-way that impacts traffic may be done in freezing weather conditions. Significant reduced visibility conditions may be cause for the County to stop the work.

19. RECORD DRAWINGS. The Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record any approved deviations in construction from the approved plans, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the County upon request. Failure to conform to this requirement may result in delay of final acceptance of the project.

TRAFFIC CONTROL

1. Specific traffic control plans may be required as a part of the permit. Temporary traffic control signage shall be 36” x 36”. Signs must be clean and in good repair. The work area during construction or maintenance performed under the permit provisions shall be protected in accordance with the current Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highway. US Department of Transportation (USDOT), and the Oregon Department of Transportation (ODOT) supplements thereto. Flaggers must carry a current card or certificate indicating their completion of an approved work zone control course.

2. The Contractor shall be responsible to see to it that all persons including but not limited to contractors, employees, subcontractors and visitors shall at all times wear safety vests/shirts or rain gear when on site in the public right-of-way. Persons remaining in vehicles such as truck drivers may be exempted.

3. Any work requiring traffic control before dawn or after dusk shall have lighted traffic control per the requirements in the MUTCD.

4. When new roads are paved, they shall remain closed to all vehicular traffic by Type III barricades until all signage and striping is in place per the approved plans.

5. If a permanently installed traffic sign is in the way of the work, the sign may temporarily be installed on Type III barricades when approved by the County, but in no case may a sign be leaned up against another object, set aside, placed on the ground, or moved to another location.

6. The Contractor is responsible for furnishing and installing street signs. Street name signs and other custom signs are to be procured from the County Sign Shop through a Work Order.

7. Any permanent traffic striping removed or eradicated shall be re-marked, and maintained by the contractor.

8. Access to driveways shall be maintained at all times. All traffic control measures shall be approved and in place before any construction activity.

9. Sidewalks closed when needed for work operations shall be reopened as soon as possible and at the end of the day. An alternate pedestrian path must be approved by the County and properly signed to reroute pedestrians.

10. All stubbed streets for future road construction shall have a Type III barricade centered and across 2/3 the width of the road, a barricade across the ends of the sidewalk, and a six inch (6”) asphalt berm crossing the road from curb to curb on curbed streets.

EXISTING UTILITIES & FACILITIES

1. The Contractor shall install and maintain Erosion and Sediment Control (ESC) measures throughout the duration of the project, including but not limited to, a 50-foot long gravel construction entrance. Silt fences or straw bales may be required as additional measures.

2. All existing facilities shall be maintained in–place by the Contractor unless otherwise shown or directed. The Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. The Contractor will leave existing facilities in an equal or better-than-original condition and to the satisfaction of the County Engineer.

3. Existing surface features, such as walls and fencing, shall normally be replaced in kind.

4. The Contractor shall have all existing utilities located prior to the start of any work. Any disturbed underground locating/safety warning tape shall be restored in kind as found.

5. The Contractor shall field verify location and depth of all existing utilities where new facilities cross. The Contractor shall be responsible for exposing potential utility conflicts far enough ahead of construction to make necessary grade modifications without delaying the work. If grade modification is necessary, the Contractor shall notify the Design Engineer, and the Design Engineer shall obtain approval from the County before construction. All utility crossings shall be pot-holed as necessary prior to excavating to prevent grade or alignment conflicts. Follow Marion County "Pothole Construction" detail.

6. Utilities or portions of utilities that are abandoned in place shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug with concrete the remaining exposed end of the abandoned utility to a minimum length into the stub equal to twice the pipe's diameter.

7. The Contractor shall remove all existing mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition. Temporary relocation of removed mailboxes is required. Temporary relocation of removed fencing shall be required unless special arrangements are made with the adjacent property owner.

8. Removed asphalt road surface shall be patched with cold (temporary) or hot mix asphalt, or steel plated at the close of each workday. No trenches within 10' of the pavement shall be left open overnight. Open trenches in the right-of-way beyond 10' of the pavement shall be protected with lighted barricades and fencing overnight.

9. The Contractor shall locate and mark all existing property and street monuments prior to construction. A Registered Professional Land Surveyor at the Contractor's expense shall replace any monuments disturbed during construction of the project.

10. Site grading shall not impact surrounding properties in a negative manner. Construction of improvements on the property shall not block historical or naturally occurring runoff from adjacent properties.

11. No natural drainage shall be modified without County approval. Temporary relocation of stream or storm water flows/facilities requires prior approval of the DEQ and the County. Trench or area dewatering shall only be disposed of in an approved manner. Temporary sediment traps may be required. Dewatering near a river, lake or stream shall conform to DEQ requirements.

CLEARING, GRADING & PAVING

1. Property owners shall be given at least two weeks of prior notice to remove any vegetation in the right-of-way along their frontage that will be impacted by the construction. The owner shall also be given any removed vegetation if they should so desire, including felled trees. This vegetation shall be placed on the adjacent private property, out of the right-of-way.

2. Landscape outside turnpike road shoulders and ditches that is disturbed by construction shall normally be restored. Shrub and tree trimmings shall be removed daily from the site. Lawn area restoration shall include a minimum of at least a 4" layer of topsoil to match the original elevation and shall be raked free of rocks and debris. The area shall be reseeded after the first fall rains, or earlier if approved by the County and adjacent property owner. Planted shrubs shall be replaced in kind and maintained until established. Trees and volunteer shrubs shall normally not be replaced.

3. Clear and grub within work limits all surface vegetation, trees, stumps, brush, roots, etc. All trees, brush, and debris associated with clearing, stripping, or grading shall be removed and disposed of out of the right-of-way.

4. When a turnpike access is scheduled to be removed, the asphalt approach apron shall be saw cut in line with the edge of the road pavement and removed. The culvert pipe shall be removed and the ditch restored. Fresh shoulder rock shall be provided to match the existing shoulder.

5. All road construction that occurs between October 1 and May 31 shall include the placement of ODOT Type I drainage fabric or approved equal on top of the prepared sub-grade before the crushed rock aggregate base section (base rock) is constructed.

6. County approval is required before proceeding with placement of base rock. Proof roll of the sub-grade and base rock with a fully loaded dump truck provided by the Contractor shall be required. (Questionable areas shall be over excavated with filter fabric as directed by the County.) Crushed base rock shall conform to section 00300 - Roadwork of ODOT standard specifications. Compaction shall be at least 95% of the maximum dry density per AASHTO T-99/T-180 test methods. The County must receive written base rock compaction test results from an independent testing laboratory at least two days before placing AC pavement. A random test is required for each 100 feet of roadway stationing, randomly at each trench crossing, and as directed by the County.

7. During compaction of aggregate base, material shall be maintained within 2% of the optimum moisture content. The Contractor shall begin compaction of each layer immediately after the material is spread, and continue until a density of not less than 95% of AASHTO T-99/T-180 has been achieved.

8. The surface of the aggregate base shall be within – 0.04 foot to + 0.02 foot of plan elevation at any one point. The final surface shall not deviate at any point more than 0.04 foot from the bottom of a 12-foot straightedge laid in any direction of the surface of the roadway.

9. All fills within the public right-of-way shall be engineered. Construct roadway fills in six-inch (6") lifts, compacting each lift to 95% of the maximum dry density per AASHTO T-99/T-180 methods. Fills against existing soils shall be constructed by benching into the existing soil. Written compaction

tests of the fill by an independent testing laboratory must be received and approved by the County if requested by the inspector.

10. When the County approves the cutting of road pavement the cuts shall be clean straight lines by sawing. The pavement restoration shall be a “blanket inlay” to tie to the existing pavement. Strips of existing pavement less than 3’ wide adjacent to the removed asphalt shall also be removed and repaved as one patch. No abrupt pavement edges are allowed overnight. Abrupt edges shall be backfilled with base rock to the pavement level with a maximum 3:1 down slope. Pavement overlays shall be joined to existing pavement via a ‘blanket inlay” joint. Feather overlays are not normally approved.

11. County approval is required before proceeding with paving. The County shall determine the Hot Mixed Asphalt Concrete (HMAC) mix. Local roads shall normally be Level 2, ½-inch, Dense, PG 64-22; and truck/bus routes Level 3, ½-inch, Dense, PG 64-22. Base and intermediate course lifts may be composed of larger ¾-inch aggregate provided lift thickness is a minimum of 2.25 inches. Pavement shall be compacted to a minimum of 91% of maximum density as determined by the Rice standard method for the first course and 92% on any additional or top courses. The County must receive written compaction test results from an independent testing laboratory before the construction work is accepted. A random test is required for each 150’ of roadway stationing and as directed by the County.

12. Any finish pavement with a Rice standard density less than a 92% shall be deemed unsuitable, and will be rejected. Any rejected material shall be removed and replaced at the expense of the Contractor.

13. Where asphalt tapers are constructed to move traffic through pavement transition areas, the tapers shall have rock shoulders with a minimum width of 2’. Storm lines shall be extended out from curbed road sections to point where the shoulders of tapers will not affect the slopes of the existing storm ditch.

14. New or overlay paving on non-curbed sections of County roads shall normally include paving approaches to join existing paving, if within the right-of-way, or paving gravel approaches in the right-of-way to a maximum of 20 feet from the edge of road pavement.
15. The Contractor shall be responsible for adjusting all existing and constructed manholes, catch basins, cleanouts, vaults, etc., that are affected by construction and/or fill to finish grade. Storm drain inlet structures shall be adjusted so water flows into the structure without ponding water.

16. Paving on non-curbed roads shall also include the addition of shoulder rock to bring the shoulder up to the new pavement elevation.

17. Unless otherwise shown on the drawings, no cut slopes shall be constructed steeper that 1- ½ H:1V or fill slopes steeper than 4H:1V.

18. All planter areas shall be backfilled with approved topsoil at a minimum of eight inches (8”) thick. Planter strips between curbs and sidewalks shall be backfilled with four inches (4”) of topsoil flush with the top of concrete. Stripping materials shall not be used for planter backfill.

19. Contractor shall hydro-seed all exposed slopes and disturbed areas that are not scheduled to be landscaped.

20. Grading shown on the drawings is critical to functioning of detention system and shall be strictly followed.

STORM, WATER, AND SANITARY UTILITIES

1. Discharge of storm water to a drywell or french/trench drain (underground injection control (UIC) system) requires the approval of the Oregon DEQ prior to construction.

2. Storm drainpipe materials are to conform to the construction drawings and County requirements. The Contractor shall use uniform pipe material on each pipe run between structures unless otherwise directed or approved. Jointed HDPE pipe 15" or smaller shall not be used for pipe grades of less than one percent (1%) or grades exceeding ten percent (10%). Storm pipe shall be watertight with appropriate gaskets and connections.

3. All pipes shall be bedded with ¾" minus crushed rock bedding (27" diameter and smaller: 4" bedding, 30" to 60" diameter: 5" bedding, and 66" and larger: 6" bedding) and backfilled with compacted ¾" minus crushed rock in the pipe zone (crushed rock shall extend a minimum of 12" over the top of the pipe in all cases). Pipe trenches shall have a minimum of 8" of backfill on each side of the pipe.

4. Catch basins and junction boxes shall be set square with the street wherein they lie. Storm drain inlet structures and paving shall be adjusted so water flows into the structure without ponding water.

5. Drainage structures adjacent to new road taper sections shall be positioned at the gravel shoulder so that the fore slope of the ditch along the taper shall be no greater than a 3:1 slope.

6. Catch basins in the County right-of-way shall typically be ODOT Type G-2 or CG-2. Area drains shall typically be the Marion County Type I catch basin as per standard drawing. Catch basins shall have sumps of 18" and 4" drain pipes at the road base level and at the bottom (to drain the box dry after wet weather). The drain pipes shall extend 6" beyond the box with the end covered with filter fabric.

7. The Type III catch basin shall typically be set back into the back slope of the ditch and slope with the back slope. The Type III catch basin shall typically have a 15o sloped grate.

8. Openings for connections to existing manholes, catch basins, or pipes shall be made by saw cutting or core-drilling. (Opening by hammering, including pneumatic jackhammers, is prohibited.) Connections shall be watertight, manufactured tees or saddles, and provide a smooth flow into and through the existing structure.

9. Unless otherwise approved by the County Engineer, all private storm drain connections to a public system shall be by manufactured tees or saddles and conform to County standards.

10. Detectable acid and alkali warning tape shall be provided along the full length of all-sanitary and storm laterals not located under sidewalks or paved portions of public streets. Underground warning tape shall be continuous the entire length of service laterals installed from the mainline to the back of the Public Utility Easement (PUE).

11. Trenches in road areas shall normally be backfilled with 1" minus crushed rock. Rock backfill shall be tested for compaction randomly every 200' of trench. Compaction shall be at least 95% of the maximum dry density per AASHTO T-99/T-180 test methods.

12. Before mandrel testing and/or Television (TV) inspection, flush and clean all storm lines, and remove all foreign material from the lines and manholes.

13. Upon completion of all storm line construction, testing, and repair, the Contractor shall have conducted a color TV acceptance DVD or digital recorded video inspection of all public storm lines. The TV inspection shall be conducted by an approved independent technical service. Water shall be discharged into the pipe shortly prior to inspection so as to reveal any low areas. Inspection shall be made after water stops flowing. The inspection shall include a 360o view of any questionable joints and any joints at pipe material transition. A weighted standard one-inch (1") diameter ball shall be dragged in the near forefront of the view (1/3 up in the view), and it shall be free to drop at least one and half inches (1½") below the plane of the camera tractor. The video operator shall audibly note on the tape and indicate on the written report the beginning and ending of any sags 3/8" or greater, and changes of ¼" in depth. No labeling on the view shall obstruct the clear view of the ball and water around it. Inspection videos showing dirt/rock/debris in the line will not be approved. The DVD or digital recording and written report shall be delivered to the County at least one week before asphalt paving for review and approval.

14. The Contractor shall conduct a deflection test of flexible storm sewer pipes by pulling an approved mandrel that shall be 95% of the initial pipe diameter. This test shall be conducted not more than 30 days after the trench backfilling and compaction has been completed. Tests shall be done in witness by the County inspector before asphalt paving and before the construction work is accepted.

15. Trench excavation under curbs or sidewalks requires removal of the effected curbs and/or sidewalks. The curbs and/or sidewalks shall be saw cut and removed at a tooled joint.

16. All non-metallic water, sanitary, and storm sewer piping shall have an electrically conductive insulated 12-gauge copper tracer wire the full length of the installed pipe using blue wire for water and green for storm and sanitary piping. Tracer wire shall be extended up into all valve boxes, manholes, and catch basins. Tracer wire penetrations into manholes and catch basins shall be within 18" of the rim elevation and adjacent to manhole steps. The tracer wire shall be tied to the top manhole step or otherwise supported to allow retrieval from the outside of the structure.

17. No trenches in roads or driveways, or within ten feet (10') of the road pavement, shall be left in an open condition overnight. All such trenches shall be closed before the end of each workday and normal traffic flow restored.

CURBS AND SIDEWALKS

1. The Contractor shall have the batching plant email to Marion County (to MCLDEP@co.marion.or.us) verification of the mix's designed strength (minimum 3000-psi in 28 days) to be used on the project 48 hours before pouring concrete. Testing of the concrete by an independent certified testing laboratory may be required by the County. Testing may include tests for slump, air, and cylinders for all structures, curbs, sidewalks, and Portland Cement Concrete (PCC) pavements. One set of cylinders per 100 cubic yards of concrete poured per day is normal. Slump and air tests are required on the same load as the cylinder test.

2. Unless otherwise shown or indicated on the drawings, six-inch (6") nominal curb exposure shall be used for design of all parking lots and streets.

3. Sidewalks shall be a minimum thickness of concrete of four inches (4") and standard driveways shall be a minimum of six inches (6"). Commercial use driveways and alley approaches shall be minimum eight inches (8") of concrete. All curbs, sidewalks, and driveways shall be constructed using 3000-psi commercial grade concrete with Type I or Type ID clear curing compound.

4. Concrete sidewalks which are not continuous to an existing sidewalk shall be joined to the road asphalt at the end of the walk by a ramp the same width of the sidewalk. Asphalt ramps shall have two and a half inches (2 ½") of asphalt such that the grade and cross slope of the ramp meets the Americans with Disabilities Act (ADA) requirements.

5. Blunt curb ends shall have 45 degree tapered ends continuing to the bottom of the curb section separated from the full height curb by a deep scored contraction joint.

6. The Contractor shall provide a minimum of two curb weep holes per lot to provide for lot drainage. Weep holes shall also be provided as required as additional drain pipes shown on the drawings. Weep holes shall be located two feet (2') from each property line or as directed by the County.

7. The Contractor shall install rain drain weep hole pipe thru the curb to six inches (6") behind the back of the curb prior to acceptance of the curbing by the County. Weep holes installed in existing curbs shall be core drilled. Drainpipe shall be schedule 40 PVC.

8. Top of curbs shall be stamped with a 'S' or a 'W' at the point where each sanitary sewer lateral or water service lateral crosses the curb, respectively. Letters shall be a minimum of two inches (2") high.

9. Stringless GPS-Guided Curb Machine pours shall be verified in writing by Engineer of Record to Marion County before asphalt paving will be allowed.

PUC UTILITIES

1. Unless otherwise shown on the drawings and approved by jurisdiction having authority, all new Public Utility Company (P.U.C.) utilities (power, cable TV, telephone & gas) shall be installed underground. All utilities and utility laterals that will lie under new roads or new pavement must be in place prior to paving.

2. The Contractor shall coordinate with power, telephone, and cable TV companies for location of vaults, pedestals, etc. All above-grade facilities shall be placed in a location outside the proposed sidewalk or gravel shoulder/ditch area.

3. Power, telephone, and cable service conduits shall be installed per utility company requirements with pull wire. The Contractor shall verify with utility company for size and type of conduit prior to construction. All changes in direction of utility conduit runs shall have long radius steel bends.

4. The Contractor shall notify and coordinate with utilities for relocation of power poles, vaults, etc.

STREETLIGHTS

1. Streetlights shall be installed after all other earthwork and public utility installations are completed and after rough grading of the property is accomplished to prevent damage to the poles.

2. Street light poles shall be set to a depth as specified by the manufacturer, but not less than five feet (5').
3. Street light poles shall be installed within one degree (1o) of plumb.

SITE CONDITIONS

1. Paved roads shall be kept clean of dirt and debris. Flushing the pavement shall be used to control dust. Any dirtied pavement shall be flushed clean at the end of each workday.

2. Cuts in existing county road pavement require a hard surface in the travel lane and turn radius when the road is open to traffic. Hard surfaces include non-compressible backfill, "cold mix" patch, steel plates, or the permanent restoration of the pavement as required in the permit. The permanent surface shall be constructed as soon as possible.

3. Trenches and pits within ten feet (10') of the travel lane must be backfilled or steel plated when the lane is open to night traffic. During daylight hours, cone and barricades are required.

4. No construction related equipment or materials should be stored on the existing county road or shoulder, including rock piles, pre-cast structures, pipe, portable toilets, etc.

5. Equipment causing pavement damage to a county road shall immediately cease work and be removed from the road. Extensive damage may require full depth restoration. Marked pavement may require blanket inlay restoration as directed by the County Engineer.

6. Any failure in the proper and timely restoration or maintenance of the existing county road surface, the roadside, and/or vegetation, shall be cause for Marion County to make or have made the restorations at the permittee's expense.